

Photonics enables the future of digital airports –

Sweden first in the world with remotely controlled airports

By deploying Remote Tower Services (RTS) one or numerous Air Traffic Control towers can be operated from another location irrespective of distance. The result is an airport which can offer more flexible air traffic services "on demand" and versatile opening hours to meet customer requirements. Furthermore, it has also a great potential for further development, with the possibility to become a real game changer in the future of control tower building. The main innovative aspect of RTS is that it does not need the physical presence of controllers. Through this concept, in the future a tower could be controlled from any country or location and one RTS could even control several airports.

Defence and security company SAAB AB and the Swedish Civil Aviation Administration (LFV) have together developed the operational and technological solutions for remotely operated air traffic controlled airports. It took ten years to develop. SAAB's Digital Tower Solution is the first remote and digital air traffic solution in operation in the world. Saab is the first supplier in the world to offer a certified remote and digital air traffic management solution; to date, it has accumulated over 4000 hours in operation.

Örnsköldsvik Airport in Sweden became the world's first remotely operated airport in the world in April 2015 as SAAB's Remote Tower was taken into operation. In the Remote Tower Center (RTC), placed 150 km away at Sundsvall Airport, the tower windows have been replaced by fifteen 55 inch LCD-screens that show the runway, taxiway and apron of Örnsköldsvik Airport, where the entire airport is filmed using 14 high resolution cameras on a single mast showing clearly what is happening, and where you also can zoom in on special areas. The visual camera recordings are saved for 30 days.

Sweden's Sundsvall Timrå Airport started during this summer 2016 and will be in full operation during 2017. The purpose is to transfer the Aerodrome- and Approach Control Services from TWR to RTC including a visual monitoring of the airport and its surroundings by HD cameras covering 360°. After a transitional period RTC will provide full time Aerodrome- and Approach Control Services for Sundsvall-Timrå Airport. Linköping City Airport will follow during 2017.

For this achievement, Saab together with LFV received the prestigious IHS Jane's Air Traffic Control (ATC) Award for delivering the first operational and approved Remote Tower in the world. The price ceremony took place at WATM - the global trade fair in Madrid for Air Traffic Management in March 2016.

Links:

- 1) <https://www.youtube.com/watch?v=l8zg1sESPBY>
- 2) <https://www.youtube.com/watch?v=qQy6cXYx43M>
- 3) <http://saabgroup.com/sv/media/news-press/news/2016-03/saabs-remote-tower-wins-prestigious-award/>
- 4) http://ec.europa.eu/transport/modes/air/ses/ses-award/winners/tower_en
- 5) <https://www.lfv.se/en/news/news-2016/lfv-and-saab-recvies-janes-awards-2016-for-remote-tower-services>